



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/215,440	12/18/98	LEWIS	W 17177

MM21/1002
THE WHITAKER CORPORATION
4550 NEW LINDEN HILL ROAD SUITE 450
WILMINGTON DE 19808-2952

EXAMINER

LAUCHMAN, L

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 10/02/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Notice of Allowability

Application No.
09/215,440

Applicant(s)
Lewis

Examiner
L. G. Lauchman

Group Art Unit
2877

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☐ This communication is responsive to _____.

☒ The allowed claim(s) is/are 1-4.

☐ The drawings filed on _____ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☒ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☒ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 7.

☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

☒ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☒ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

1A

Application/Control Number: 09/215,440

Page 2

Art Unit: 2877

Drawings

1. The drawings filed on 12/18/98 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign 11 mentioned in the description on page 8, line 7.

Correction is required.

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Bradley N. Ditty on 9/22/2000.

4. The application has been amended as follows:

In the specifications, page 3, last line in the ~~Brief Description of the Drawing~~, -- Figure 5....-- starts a new paragraph.

In the specifications, page 5, line 17, two checkered symbols have been ~~replaced~~ with α and β , respectively.

Art Unit: 2877

In the claims, page 15, last line --(*covers refractive element without Y axis pivot)-- has been deleted.

In the claims, page 14, line 23, a comma after --waveguide-- has been removed, and a comma after --array-- has been inserted.

Allowable Subject Matter

5. Claims 1-4 are allowed.
6. The following is an examiner's statement of reasons for allowance:

As to Claim 1, the prior art of record fails to show all the elements as presently claimed, wherein a refractive element extends through the chamber aperture and has a plurality of angular positions for selectively coupling one of the N input waveguides with one of the M output waveguides.

As to Claim 2, the prior art of record fails to show all the elements as presently claimed, wherein means for moving the reflector and the waveguide array, in their space apart, fixed orientation, and the refractive element holding fixture with respect to each other to change the orientation of the parallel major surfaces of the refractive element with respect to the reflector and waveguide array.

As to Claim 3, the prior art of record fails to show all the steps as presently claimed, wherein the step of providing means for mounting the reflector and waveguide, array in their spaced apart, fixed orientation, and the refractive element holding fixture so they are movable

Art Unit: 2877

with respect to each other and that movement changes the orientation of the parallel major surfaces of the refractive element with respect to the reflector and waveguide array.

As to Claim 4, the prior art of record fails to show all the elements as presently claimed, wherein means for moving the reflector and the waveguide array, in their space apart, fixed orientation, and the refractive element holding fixture with respect to each other to change the orientation of the parallel major surfaces of the refractive element with respect to the reflector and waveguide array.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsai, Wagner, Unterleitner et al, Hoult, Emmons, Watanabe, and Kapany et al all describe fiber optical switches.

Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. Papers should be faxed to TC 2877 via the PTO Fax Center located in CP4-4C23. The faxing of such papers must conform with the notice published in the Official

Art Unit: 2877

Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Center number is (703)308-7722 or 308-7724.

If the Applicant wishes to send a Fax dealing with either a Proposed Amendment or for discussion for a phone interview then the fax should:

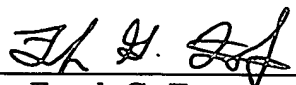
- a) Contain either the statement "DRAFT" or "PROPOSED AMENDMENT" on the Fax Cover Sheet; and
- b) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Layla G. Lauchman whose telephone number is (703) 305-0071.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC receptionist whose telephone number is (703) 308-0956.

Layla G. Lauchman
Patent Examiner
Art Unit 2877
September 23, 2000/lgl



Frank G. Font
Supervisory Patent Examiner
AU 2877



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

MM21/1002

THE WHITAKER CORPORATION
4550 NEW LINDEN HILL ROAD SUITE 450
WILMINGTON DE 19808-2952

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART. UNIT	DATE MAILED
09/215,440	12/18/98	004	LAUCHMAN, L 2877	10/02/00
First Named Applicant	LEWIS, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION: AN NXM OPTICAL SWITCH HAVING A SIMPLIFIED ALIGNMENT MEANS

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2 17177	385-018.000	T12	UTILITY	NO	\$1240.00	01/02/01

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.
If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B-Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.
Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY